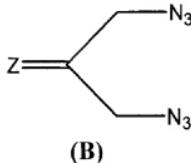
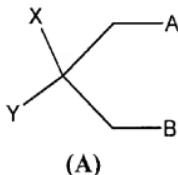


NOVEL POLYAZIDO COMPOUNDS

Abstract

This invention relates to a series of novel compounds having the general structures A and B:



1. X = N₃; Y = CH₂N₃; A = B = N₃
2. X = OH; Y = CH₂N₃; A = B = N₃
3. X = ONO₂; Y = CH₂N₃; A = B = N₃
4. X = NO₂; Y = CH₂N₃; A = B = N₃
5. X = Y = NO₂; A = B = N₃
12. X = Y = NO₂; A = B =
13. X = OH; A = B =
- Y =
6. Z = CH₂
7. Z = O
8. Z = NOH
- 7-DNPH. Z =

including 2-azido-2-azidomethyl-1,3-diazidopropane (1),
2-azidomethyl-2-hydroxy-1,3-diazidopropane (2),
2-azidomethyl-2-nitro-1,3-diazidopropane (3),
2-azidomethyl-2-nitro-1,3-diazidopropane (4),
2,2-dinitro-1,3-diazidopropane (5), methylhydrazide (6), a dimer

of methallyldiazide (6), comprising
3a,8a-Bis-azidomethyl-3a,4,8a,9-tetrahydro-3H,8H-bis[1,2,3]triazolo[1,5-a;1",5"-d]pyrazine (6-Dimer), 1,3-diazidoacetone (7),
and 2-Oximido-1,3-diazidopropane (8). Also shown are reaction
intermediates of these compounds, including
2,2-bis(chloromethyl)oxirane (9), and
2,2-bis(azidomethyl)oxirane (10). In addition, a number of potentially useful energetic compounds have been prepared from the low molecular weight polyazido compounds above, including N-(2-azido-1-azidomethyl-ethylidene)-N''-(2,4-dinitrophenyl)-hydrazine (7-DNPH), 1,3-Bis(4-carboxytriazolyl)2,2-dinitropropane (12), Tris(4-carboxytriazolomethyl)methanol (13), Benzene-1,3,5-tricarboxylic acid
tris(2-azido-1,1-bisazidomethyl-ethyl)ester (14), Adamantane 1,3,5,7-tetracarboxylic acid
tetrakis(2-azido-1,1-bisazidomethyl-ethyl)ester (15), Adamantane carboxylic acid 2-azido-1,1-bisazidomethyl-ethyl)ester (16),
cubane 1,3,5,7-tetracarboxylic acid tetrakis
(2-azido-1,1-bisazidomethyl-ethyl)ester (17), cubane 1,4-dicarboxylic acid bis(2-azido-1,1-bisazidomethyl-ethyl)ester (18).